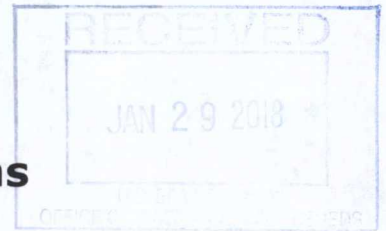


**Annual Report of Operations**
for Year 2018

To comply with NPDES General Permit No. WAG130000 for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country within the Boundaries of the State of Washington

NPDES # for your Facility:

WAG - 130023

Facility & Owner Information

Facility Name: House of Salmon	
Operator Name (Permittee): Lower Elwha Klallam Tribe	
Address: 700 Stratton Road Port Angeles WA 98363	
Email: john.mahan@elwha.org	Phone: 360-565-7270
Owner Name (if different from operator):	
Email:	Phone:

Best Management Practices (BMP) PlanHas the BMP Plan been reviewed this year? ☒ Yes ☐ NoDoes the BMP Plan fulfill the requirements of the General Permit? ☒ Yes ☐ No

Summarize any changes to the BMP Plan since the last annual report. Attach additional pages if necessary.

No Changes

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Operations and Production

Total harvestable weight produced in the past calendar year in pounds (lbs): **46,013 lbs**
 Pounds of food fed to fish during the maximum month:
7,286 pounds March

List the species grown or held at your facility and the annual production of each in gross harvestable weight. If fish were released rather than harvested, list the weight at time of release.

Species	Fish Produced	Receiving Water(s) to which Fish were Released	Month Released/ Spawned
Chum	151 lbs	Elwha River	May
Steelhead	20,619 lbs	Elwha River	April
Coho	25,243 lbs	Elwha River	April

Fill in the table below with production numbers from the past year. List the **maximum** amount of fish on-site and the maximum amount of food fed **per month**.

Month	Total Fish (lbs)	Fish Feed (lbs)	Month	Total Fish (lbs)	Fish Feed (lbs)
January	35628.67	5388.53	July	7223.41	1689.03
February	39957.72	5985.57	August	9247.64	1372.54
March	47729.28	7285.89	September	11243.71	1717.67
April	2378.02	550.22	October	14301.11	1763.43
May	4519.70	801.81	November	17908.07	3095.09
June	4969.44	1502.34	December	21255.36	3910.13

Additional Comments:

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Solid Waste Disposal

Describe the solid waste disposed of during the calendar year (including fish mortalities).

Type of Solid Disposed	Date Disposed	Location Disposed

Additional Comments:
Routine fish mortalities were disposed of daily in municipal waste.

Fish Mortalities

Include a description and the dates of mass mortalities in the past year (more than 5% per week). Attach additional pages, if necessary. Include total mortalities from all causes.

Date	Cause of Deaths	Steps Taken to Correct Problem	Pounds of Fish

Additional Comments:
No mass mortalities occurred

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Noncompliance Summary

Include a description and the dates of noncompliance events (including spills), the reasons for the incidents, and the steps taken to correct the problems. Attach additional pages, if necessary.

January monthly DMR sample exceeded permitted values for effluent net suspended solids.

This sample was taken during a high water event and the resulting non-compliance event was the result of high fluctuations in surface water turbidity throughout the sampling period and difficulty in obtaining effluent samples without the incidental inclusion of turbid river water. It was not the result of suspended solids entering the effluent as a result of hatchery operations.

Effluent net suspended solid samples are generally non detectable or well below permitted values.

More care will be taken during sampling to ensure no turbid river water is incidentally included in the effluent sample.

Inspections & Repairs for Production & Wastewater Treatment Systems

Date Inspected	Date Repaired	Description of System Inspected and/or Repaired
Daily		The facility is inspected daily

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Aquaculture Drugs and Chemicals

Please indicate whether you used each drug/chemical **during the past calendar year**.

Describe the use of each drug/chemical in more detail on the following pages.

Used in the past year?	Drug or Chemical
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Azithromycin no
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Chloramine-T: <i>See additional reporting requirements on page 7</i>
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Chlorine
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Draxxin
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Erythromycin - injectable
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Erythromycin - medicated feed
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Florfenicol (Aquaflor)
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Formalin - 37% formaldehyde: <i>See additional reporting requirements on page 7</i>
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Herbicide - describe:
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hormone - describe:
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydrogen Peroxide: <i>See additional reporting requirements on page 7</i>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Iodine: <i>See additional reporting requirements on page 7</i>
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Oxytetracycline
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Potassium Permanganate: <i>See additional reporting requirements on page 7</i>
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Romet
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	SLICE (emamectin benzoate)
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Sodium Chloride - salt
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Vibrio vaccine
<input type="checkbox"/> Yes <input type="checkbox"/> No	Other:
<input type="checkbox"/> Yes <input type="checkbox"/> No	Other:

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Aquaculture Drugs and Chemicals (cont'd)

Describe all drug and/or chemical treatments that occurred during the year. Fill out the information below for each drug or chemical, plus page 7 for water-borne treatments. Attach additional pages as necessary.

Brand Name:		Generic Name:	
Reason for use:			
<input type="checkbox"/> Preventative/Prophylactic <input type="checkbox"/> As-needed	Total quantity of formulated product per treatment (specify units):	Total quantity of formulated product used in past year (specify units):	
Date(s) of treatment:			Total number of treatments in past year:
Maximum daily volume of treated water:	Treatment concentration (specify units):	Duration and frequency of treatment(s):	
Method of application:	<input type="checkbox"/> Static Bath <input type="checkbox"/> Flow-through	<input type="checkbox"/> Medicated Feed <input type="checkbox"/> Other (describe):	
Location in facility chemical was used (check all that apply):	<input type="checkbox"/> Raceways <input type="checkbox"/> Incubation building	<input type="checkbox"/> Ponds <input type="checkbox"/> Off-line settling basin	<input type="checkbox"/> Other (describe):
Where did water treated with this chemical go? (check all that apply):	<input type="checkbox"/> Discharged w/o treatment <input type="checkbox"/> Settling basin	<input type="checkbox"/> Septic System <input type="checkbox"/> Publicly owned treatment works	<input type="checkbox"/> Other (describe):
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use:			
<hr/>			
Brand Name: Ovadine (iodophor)		Generic Name:	
Reason for use: egg disinfection			
<input checked="" type="checkbox"/> Preventative/Prophylactic <input type="checkbox"/> As-needed	Total quantity of formulated product per treatment: 75 ml	Total quantity of formulated product used in past year (specify units): 1.82 gallons	
Date(s) of treatment: See ovadine treatment dates attached			Total number of treatments in past year: 19
Maximum daily volume of treated water: 28.6 gallons	Treatment concentration (specify units): 75 ppm	Duration and frequency of treatment(s): 1 hour once	
Method of application:	<input checked="" type="checkbox"/> Static Bath <input type="checkbox"/> Flow-through	<input type="checkbox"/> Medicated Feed <input type="checkbox"/> Other (describe):	
Location in facility chemical was used (check all that apply):	<input type="checkbox"/> Raceways <input checked="" type="checkbox"/> Incubation building	<input type="checkbox"/> Ponds <input type="checkbox"/> Off-line settling basin	<input type="checkbox"/> Other (describe):
Where did water treated with this chemical go? (check all that apply):	<input checked="" type="checkbox"/> Discharged w/o treatment <input type="checkbox"/> Settling basin	<input type="checkbox"/> Septic System <input type="checkbox"/> Publicly owned treatment works	<input type="checkbox"/> Other (describe):
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use:			

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Aquaculture Drugs and Chemicals (cont'd)

Additional Reporting Requirements for Water-Borne Treatments

- If a water-borne treatment was used during the calendar year, Permittees must include detailed records/calculations as an attachment to this Annual Report in order to demonstrate how the maximum effluent concentrations of solution and active ingredient were calculated for each chemical.
- EPA recognizes that water-borne treatments may vary in the volume of the vessels treated, concentration, quantity of product, etc. Permittees must provide the information listed in the following tables for a reasonable worst case (i.e., maximum effluent concentration) scenario, not for each individual treatment.
- Permittees must submit this information and calculate the maximum effluent concentration for each water-borne chemical used during the past calendar year.
- See also Appendix D for the Chemical Log Sheet.

Static Bath Treatments <i>Iodine</i>		
Tank Volume	108.25	Liters
Desired Static Bath Treatment Concentration	75 ppm	µg/L
Volume of Product Needed	.825	Liters Product
Maximum Effluent Concentration of: 1) Solution and 2) Active Ingredient	Solution: .27 ppm Active Ingredient: .027 ppm	<div style="text-align: right;">+ Specify Units</div>
Minimum Volume of Total (treated + untreated) Water Discharged from the Facility per day	10,713,600 gallons	Specify Units
Maximum % of Facility Discharge Treated	.17	% of Total Discharge

Flow-Through Treatments		
Tank Volume		Liters
Calculated Flow Rate		Liters/Minute
Duration of Treatment		Minutes
Desired Flow-Through Treatment Concentration of Product		µg/L
Amount of Product to Add Initially		Liters Product
Amount of Product to Add During Treatment		mL/Minute
Total Volume of Product Needed		Liters Product
Maximum Effluent Concentration of: 1) Solution and 2) Active Ingredient	Solution: Active Ingredient:	<div style="text-align: right;">Specify Units</div>
Minimum Volume of Total (treated + untreated) Water Discharged from the Facility per day		Specify Units
Maximum % of Facility Discharge Treated		% of Total Discharge

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Changes to the Facility or Operations

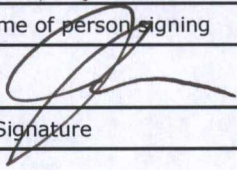
Describe any changes to the facility or operations since the last annual report.

No antibiotic treatments were administered

Settling pond effluent was directed from effluent to upland overflow

Signature and Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly evaluate and gather the information submitted. Based on my inquiry of the person or persons, who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

John Mahan	Hatchery Manager
Printed name of person signing	Title
	1-16-19
Applicant Signature	Date Signed

Submittal Information

Send the complete, signed information, along with any attachments, to the following address:

U.S. EPA Region 10, OWW-191
Washington Hatchery Annual Report
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

2018 iodophor max concentration

	Number Spawn Days	Number of Incs Green Eggs
Steelhead	8	27
Coho	9	58
Chum	2	7
Total	19	92

3.785

ml iodophore/inc

75

total iodophor

6900 ml

6.9 L

1.822985 gallons

Max discharge

ml iodophor/inc

#incs discharging at once

75

11

825 ml

804,616.12000000 gallons in the system

0.21796565 gallons iodophore

1 to
ppm

3,691,481.22933333

0.27089397

10 % iodine

0.02708940 max concentration iodine ppm

Maximum % of discharge treated

6 gpm treated incubation water

3,500 gpm facility flow

0.171428571 Maximum % of discharge treated

inc volume

2.6 gallons

28.6 gallons/ treatment

108.251 Liters/treatment

Iodophor use dates

5/1/2018
5/4/2018
5/7/2018
5/10/2018
5/15/2018
5/17/2018
5/23/2018
5/29/2018
10/31/2018
11/14/2018
11/14/2018
11/15/2018
11/19/2018
11/20/2018
11/27/2018
12/4/2018
12/11/2018
12/17/2018